THE AMERICAN ARCHITECT AND BUILDING NEWS.

Copyright, 1876, JAMES R. OSGOOD & Co.

BOSTON, MAY 6, 1876.

CONTENTS.

SUMMARY 145
ARCHITECTURAL ETCHING 146
A MILLIONNAIRE'S ARCHITECTURAL INVESTMENT 147
THE ILLUSTRATIONS 148
CHURCH OF ST. JOHN, BOIS-LE-DUC, NORTH BRABANT 149
CORRESPONDENCE: —
Letter from New York 150
COMMUNICATIONS: —
A Simple Statement of the House-Drain Question 151
The Fraser Institute 152
NOTES AND CLIPPINGS 152

THE Philadelphia Academy of the Fine Arts was founded as long ago as 1805, at a time when the city was still the first in the Union, and when a Philadelphia painter, West, was president of the Royal Academy of Great Britain. The society, active and energetic, set to work at once to build itself a house, which was finished the next year, and which, as was thought becoming in the heat of the late classical revival, was distinguished for its central domed hall, or "rotunda." It received its charter and held its first exhibition in the spring of 1806, having imported a number of casts of antique sculpture, and paintings in illustration of Shakspeare's works, according to the plan modestly proposed by its founders, "to promote the cultivation of the fine arts in the United States of America by introducing correct and elegant copies from works of the first masters in sculpture and painting." The first president of the society was the Hon. George Clymer, who was a signer of the Declaration of Independence. The Academy grew and prospered for forty years, till in 1845 its building was partially burned. The building was repaired, and the losses made good in another year; and it has grown and prospered since, keeping up its classes in drawing and painting, and accumulating its collections of casts from the antique, and of modern paintings.

LAST week the society opened its new building, which has been going on for three years from the designs of Messrs. Furness and Hewitt. It is a massive and somewhat richly ornamented building of brick and sandstone, at the corner of Broad Street and Cherry Street, with a front of one hundred feet, and a depth of two hundred and fifty-eight. The façade is to be enriched with eight panels sculptured in relief, with groups from Delaroche's painted *hemicycle* in the hall of the École des Beaux Arts. In a niche over the principal doorway, where few people will wait to study its beauties, and where it will receive more attention from the weather than from the public, the directors have exposed their one genuine antique, a headless Greek statue, in odd contrast with the trim freshness of the surrounding architecture, and with the character of the reliefs which are to accompany it. The building is substantially fire-proof, as little wood as practicable being used in it. The lower story is arranged for the use of the students and professors, containing the galleries of casts from the antique, carefully lighted for purposes of study, the life-school and modelling-rooms, a room for drapery-painting, lecture hall, and various rooms for subsidiary uses. The exhibition galleries are in the second story, where a main hall divides the building, opening into a large octagon, and intended for the exhibition of statuary. Around this hall are a dozen rooms for the exhibition of pictures, so arranged that they can be thrown together into continuous galleries, or divided in suites of various sizes, to suit the purposes of different exhibitions. The galleries are all lighted from the top, and a good deal of care has been taken to secure the right introduction and diffusion of the light. An exhibition of more than usual interest signalizes the opening of the building, of which the most interesting feature is the unveiling of Story's statue of Jerusalem, that has just been presented to the Academy.

TRAVELLERS in Italy notice with admiration the famous Gallera Vittorio Emanuele, at Milan, the glorification, as it were, of a Paris *passage*. It is really a street under roof, or, rather, two streets at right angles; one of them an eighth of a mile long, forty-seven feet wide, but without a carriageway, covered by a glass roof eighty feet above the pavement, and lined with the handsomest shops in the city. The Parisian *passages* are none of them so magnificent as this, which is the most fashionable shopping quarter of Milan; but they are extremely useful means of utilizing the interiors of blocks in cities, where land ought to be very valuable, yet is for most public uses inaccessible. We have often thought that such *passages* would be of value in our cities, especially in the northern ones, where shopping in winter weather is a matter of great discomfort and exposure. There seems to be no reason why even streets with carriageways should not be roofed over with glass; though it might not be desirable that they should be thoroughfares for traffic. There are many places in Philadelphia where such *passages* would be serviceable. We should hardly know where to choose the positions for them in New York; but in Boston, if for instance, when Temple Place was thrown open, and the buildings on it remodelled, it could have been built to a uniform height, and glazed over, we believe that the women of the city would have blessed the device that gave them a chance to step from a horse-car, and visit three or four scores of shops in the best part of the town, without draggling in the mire, or exposing themselves to rain or snow or drip. In Cincinnati, which seems at present to be outdoing our other cities in the number and novelty of its devices for public improvement, the thing has just been done, or is doing. A *passage*, or "Arcade" as it is called by the designer, Mr. Henry Bevis, is to be run through from Vine Street to Race Street, between Fourth and Fifth. It will be four hundred feet long, and have thirty-five shops on each side, above which will be offices for professional men. Two stories will be included under the roof, which will be of hammered glass. The only other "arcades" of this kind in the country, it is said, are two, one at Providence, R.I., and one at Rochester, N.Y.

THE muddle over the Chicago Court House seems to be taking on a new phase. Our readers will remember that the building, which was to be built in common by the county and the city for their joint use, was for a good while at a deadlock because the county authorities and the city authorities had appointed each their own architect, and neither the architects nor their plans could agree. A month ago a proposition was made in the city government that the county should take the whole building into its hands, and construct the part of the building which is to belong to the city, as well as its own, leaving the county architect in charge of the whole. Nothing seems as yet to have come of this proposition except some investigations of the usual unsavory kind; but some gentlemen of the city have requested Mr. Boyington, who is neither the county architect nor the city architect, to prepare a new set of designs, which could be carried out more rapidly and economically than the combined plans which had been adopted. Mr. Boyington has accordingly submitted plans; and prominent builders have offered to build the Court House from them, under strict guarantee and heavy bonds that it shall be completed satisfactorily for two million one hundred thousand dollars, and without extras, the esti-

mated cost of the original scheme being some three millions. How much will come of the proposition it is hard to guess. The city and county architects, Messrs. Egan and Tilley, have gained their positions by hard work, and apparently at some pecuniary sacrifice; and it is not likely that they will let go very readily.

The descriptions of Mr. Boyington's design, which are furnished by the Chicago papers, are curiosities of literature; but it is not easy to get a clear idea of the building from them. It appears to be classic in style, with a rusticated basement, and an order of two stories, carried over the projecting centres and angles of the four fronts, and omitted in the curtains. We are told that it contains a glass-covered "rotunda," eighty feet wide, and one hundred and fifty feet long; that "suppressed domes at each corner of the building, in the Italian style of architecture, form a pleasing feature;" that the colonnades on two fronts are "surmounted with large dome-formed roofs, contracting to a size of twenty-four feet square, which form clock-sections a hundred and eighty feet high;" also that "the clock-sections are each surmounted by a dome, the top of which is two hundred and twelve feet above the sidewalk:" that the colonnades on the other two fronts are flanked on each side by turrets, on which are more "suppressed domes." Finally it appears that the central dome, one-half of which was to be an imposing element of the composite design of the county and city architects, is also to be suppressed, since it is said that "the feature of the building is the absence of a dome, and the substitution of two handsome town-clocks."

The balance-sheets of World's Exhibitions have not been favorable, but the desire for them seems to survive nevertheless. The French have been planning for some time to hold another in 1878; and now the Prefect of the Seine asks the city of Paris for a grant of twenty-four millions of dollars to put the city in order for it. The works which it is proposed to undertake are of a kind, to be sure, which are of permanent importance for the good looks and preservation of the city; and what is spent on them will not be accounted lost, apart from the good or ill success of the exposition. The project is to raise the quays enough to prevent their being overflowed by freshets, for which the experiences of last winter were a sharp lesson: to complete the rebuilding of the exterior of the Hôtel de Ville; to build a new bridge over the Seine; to replace the ruins of the palace of St. Cloud by gardens, and obliterate those of the Tuileries in the same manner. Whether this last implies that the restoration of the Tuileries is formally given up, does not appear from any thing we read; but it is hardly probable, considering the unfinished aspect which the Louvre would wear if left uncovered on the garden side.

Meanwhile the published accounts of the financial experience at Vienna are gloomy enough. The Berlin Bauzeitung says that the public cost of the exhibition, which was beforehand estimated at six millions of gulden (say three million dollars), and afterwards at fifteen and a half, really amounted to more than nineteen millions; while the receipts, which were estimated at sixteen millions, were not much over four millions. So that, after deducting all that can be realized from the sale of the buildings, it is believed that the treasury will be out of pocket by some fourteen millions of gulden (seven million of dollars). The buildings themselves will return very little. To keep them in order, it appears, will cost more than can be got from them in rent; and so it is decided to keep only the Central Rotunda with the quadrangular block which encloses it, the Machine Hall, which is turned over to the city for fiscal use as an *Entrepôt*, and the two *Pavillons des Amateurs*, which have been converted into sculptors' studios. It is true that the Vienna exhibition suffered under an unhappy complication of disadvantages: the unfinished and disordered condition in which it was opened; the inordinate exactions of inn-keepers, and other sharpers, which drove away a great number of guests; and the cholera, which almost completed a stampede. From all these difficulties, there is reason to hope that the exhibition in Philadelphia will be preserved. The Bauzeitung hopes that this financial showing will be enough to extinguish the ambition for an *Austellung* which lingers in Germany, but thinks that France, notwithstanding the Indemnity, is rich enough to pay for glory.

ARCHITECTURAL ETCHING.

Of all forms of graphic art, perhaps none is more naturally interesting to architects than etching, because none concerns itself so immediately with those qualities in art which are most important in their work. To the architect more than to any other artist, unless it be to the figure-painter, the character and combination of lines are of commanding importance in his work. These are precisely the things, which, in true etching, take naturally the first place. The masses of an architect's composition are of prime importance, to be sure; but the essential thing in his masses is their proportion and contour, that is, their outline. The subdivisions of his façade depend entirely on the precision and feeling with which their lines are placed; and its treatment in detail and ornamentation is, first of all, a matter of refinement of form depending on line. Color is to him a most necessary adjunct, of which he cannot afford to neglect the culture; but his first and essential study must always be of lines.

These conditions lend themselves, most naturally, to expression in etching, in which the first thing (we had almost said the first and the last) is always the line. Hence, etching has been as natural a means of representing architectural forms as figures; and is, in fact, better for them than for figures, when it is necessary to render the modelling of these, which it is extremely difficult to do well with the needle. It is easily sufficient, too, for such indication of chiaroscuro as is commonly required to mark the masses and indicate the intended effect of architectural designs. It is a common tendency among architectural draughtsmen to rely on the pencil or pen more than on the brush; and, in fact, the brush, unaided by the others, is hardly adequate for their purposes. Of late, the various reproductive processes, which lend themselves better to line-work than to tints, have increased the tendency so much, that among English and American draughtsmen there seems even to be danger that the brush may fall into disuse. We have had occasion before to deprecate the neglect of the brush, both as the disuse of a noble implement, and as involving the sacrifice of color, and some danger of slighting the larger relations of design in the study of the smaller. Nevertheless, the study of line, and of mass as limited by line, remains the first study of the architect. The naturalness of this mode of expression has led us to suggest to architects that it was worth their while to learn to etch their conceptions and sketches; and we have hoped, that, if an interest in this were aroused, it might offset their temptations to let their skill in drawing rust, in the hurry of their practical work.

It is worth while to note here one difference between the aims of an architect and a painter, which is a stumbling-block to many persons, and makes men of artistic — at least of pictorial — tastes often criticise unreasonably the drawings of architects. The aim of a painter is to draw things as they look; and as he cannot give, and will not try to give, every thing that he sees, he selects those characteristics of what he draws which are to his purpose as a painter. To him the first quick impression which a scene makes on him is apt to be the commanding thing and every thing that

does not form part of that is useless or even impertinent. The transitory effects of light and shade in a building, or the more permanent marks of time and dilapidation, are as important as the details of ornament, the character of a capital, or the weight of a moulding, — often more important. With the immediate aspect of a house or a church he is concerned; with the purposes of the builder not at all. To the architect, on the other hand, the architectural purpose of the builder is properly the uppermost thing: effects that are superinduced by time or light or atmosphere are quite subordinate, and smaller things, that may escape a first glance, are still all important. His aim is, first of all, to represent things as they are, or even as they were intended to be, rather than necessarily and primarily as they look. To him forms, proportions, the character and scale of detail, are first, and picturesque effect, or the marks of age, are second. His principle of selection, therefore, is different from the painter's. Not only may he legitimately represent what is not to be seen in a first look at the building which he draws, or indicate what cannot be made out except in a close examination, but may sometimes supply; and the neglect which passes over with a firm line the crumbled edges of a moulding, or the skilful touch that restores accurately at a critical point in the design, a broken profile, may be reasonable and commendable in him. And he is not to be called upon to pay any more heed to the dilapidations, or other naturally added characteristics of the building he draws, than is consistent with his first purpose of rendering the intended form and architectural character of it.

Under these circumstances, architect and painter may have drawn the same subject, each well in his own way; and yet each may be dissatisfied with the work of the other. The painter is likely to complain, "You have not caught the spirit of your subject. Not only are your relations of tone all wrong, but your building, which is four hundred years old, looks as if it might have been built a generation ago. The mouldings are straightened, the capitals furbished up; and the whole building has lost the time-worn, venerable look, and the air of long repose, that were its chief charm, and assimilated it to its surroundings." The architect, in his turn, could probably answer something in this way: "Your arcade is stilted, your columns lean, your base is much too high; and it is impossible to guess whether your capitals are meant for Corinthian or thirteenth-century Gothic. The pitch of your gable is wrong: this string-course is much too heavy, and that too light. You have entirely missed the character of the building." Each might be right, and each might have done his work well in his way.

Prout's way of working is a case in point. He was supremely negligent of detail: he would make delicate thirteenth-century or Flamboyant work look as coarse as the rudest Romanesque; yet his architectural drawings, though unsatisfactory enough to an architect as such, are not only vigorous and brilliant, but refined, and in their way altogether delightful. On the other hand, there are French etchers of architectural subjects, who are quite strictly architecturesque in their treatment, and as good in their way as Prout in his. It is quite true that the work of a draughtsman of architectural subjects will be worth more in proportion as he is sensitive to the pictorial sentiment of what he draws, and as he succeeds in representing more of it without sacrifice of his main object, — the truthful, refined, and spirited rendering of structural and ornamental form. The sensitiveness of his perception of shape and proportion must prevent his being altogether indifferent to the characteristics which the painter would aim to give; and so the painter would be strengthened by the sense of proportion which would enable him to give his architecture faithfully. But remembering that men can draw with real success only what they know familiarly, and that the quality of human work is improved by singleness — sometimes even by narrowness — of aim, it is useless to quarrel with either because he gives a distinctly second place to what the other puts first. The question of the relative merit or nobility of the one or the other choice is another matter, — perhaps an unimportant one, and difficult, if not insoluble.

Etching, by its very nature, being an art of limited scope, and essentially an art of selection, gives special occasion for such diversities and disagreements as we have mentioned. Letting alone differences of eye and hand, since it is difficult to tell many things at once in an etching, and since the scale of importance must be different in different minds, etching must encourage great differences of treatment, and give the widest scope for individual likings and dislikings. It is as incomplete and as sympathetic as violin-music. No art records more quickly and emphatically the individuality or the non-individuality of the artist. It is the most directly autographic of of the reproductive arts; and it registers so directly and pointedly the leading characteristics of form that it seems peculiarly adapted for record of the arts of design.

A MILLIONNAIRE'S ARCHITECTURAL INVESTMENT.

THE death of Alexander T. Stewart, whose mercantile success has recently been the topic of many newspaper homilies, naturally leads to thoughtful reflection upon that other necessary occupation of all who acquire great wealth, — the disposition and investment of it. So far as such investments are in the direction of building-improvements, they are a matter of deep interest to the architectural and building fraternities; while the success or want of success in such investments cannot fail to carry a useful lesson to all who may have it in their power to undertake extensive building operations. The encomiums bestowed on Mr. Stewart, for the moral tone which pervaded his mercantile career, are doubtless well grounded; and his death, especially at a time like this, will make his example of a successful life to be felt throughout the mercantile community.

He was not only a great merchant, but in the investment of his profits he was a great builder; and in this respect he has been brought more prominently before the community than any other man of our time. His investments were peculiar in this respect, that he never bought property for speculative purposes; and, if that was ever his purpose, it is evident that, in this respect at least, his investments were failures. He bought, primarily, valuable property for his own use; and when he had no use for more he purchased only valuable lots and buildings which had attained their full value, to all appearance, when purchased. The only exception to this may be the Hempstead estate; and in the minds of many even this cost all that it will ever be worth. When he built, his improvements were always on a stupendous scale, and excited the admiration of some and the wonder of all.

In view of these facts, it may be a fruitful subject of inquiry, how far these investments have been successful ones, as the world regards them. Of course it may be said that what he did when living was his own business; and that we admit. But, whenever a man rears gigantic monuments, whatever he does must have an influence upon architecture, and, as such, is of concern to all who are interested in architectural progress. Though it might not be proper to criticise the works of the living, we may with propriety draw useful lessons from a career which is ended.

It has been forcibly said by Ruskin, and reiterated by other eminent writers, that many know the art of making money, and but few the art of spending it. Hence the failures of many lives seen time and again. We have before us a remarkable example, not of a life which in this respect can be considered as altogether a failure, but, as we shall point out, one which has been very largely unsuccessful. This is a fact to be regretted, and can only be regarded as a misfortune.

The success or failure of real estate enterprises must be regarded from two points of view, — the financial and the artistic. Often the two are intimately blended; but the latter concerns us most. The land question does not come in here: the building question does. A building may be useful, or ornamental, or both; but it is not good architecture unless in arrangement it subserves its purpose in the best way, is wisely and economically built, using all materials most appropriate for their places and in proper quantity, combined so as to make their respective offices evident

to the eye, and ornamented only so far as not to conceal their purposes. Every example of good architecture means progress, and every example of bad architecture means retrogression. Whoever rears grand piles that are not worthy of study sets the world back; and this is more the case with buildings erected as monuments than with those erected simply for some useful purpose.

Mr. Stewart built for both objects. He was most successful in the latter, and least so in the former classes of buildings. Prominent buildings erected by him in the city of New York have cost in the aggregate six million dollars; and it is natural to ask now, what has all this outlay contributed to the progress of architectural thought? His first building enterprise was his best, and considering when it was built, and the extent of his means, his greatest. His store on the corner of Broadway and Chambers Street, New York, is a remarkable building, and even now holds its own in comparison with any other business structure in its style in that city. It was at first intended for retail and wholesale business, the retail business occupying the first and second stories, the wholesale business being confined to the three upper stories. This store was subsequently enlarged so as to take up the whole front on Broadway between Chambers and Reade Street; and, a few years since, an extension was built in the rear, having fronts on Chambers and Reade Streets, which more than doubled its cubic capacity. When the first store was built, the neighborhood of the City Hall Park was the centre of the retail business of New York; and Stewart's retail business was continued in this building until the bulk of the trade had moved a mile away. The retail business was not moved to the new store until after the whole Broadway frontage had been occupied, when he commenced the erection of the cast-iron building on the corner of Tenth Street and Broadway. This store was also built in sections, having been commenced in 1857. It was several times enlarged by additions; and it was ten years after its commencement that the whole block bounded by Broadway, Tenth Street, Fourth Avenue, and Ninth Street, was covered, having a cast-iron front of uniform design on all four sides.

From an architectural point of view, the wholesale store erected by Mr. Stewart is the only one of his numerous buildings which is worth mentioning as a piece of design. Every building erected by him subsequently seemed to be worse in design than its predecessor, the retrograde principle being quite uniformly carried out.

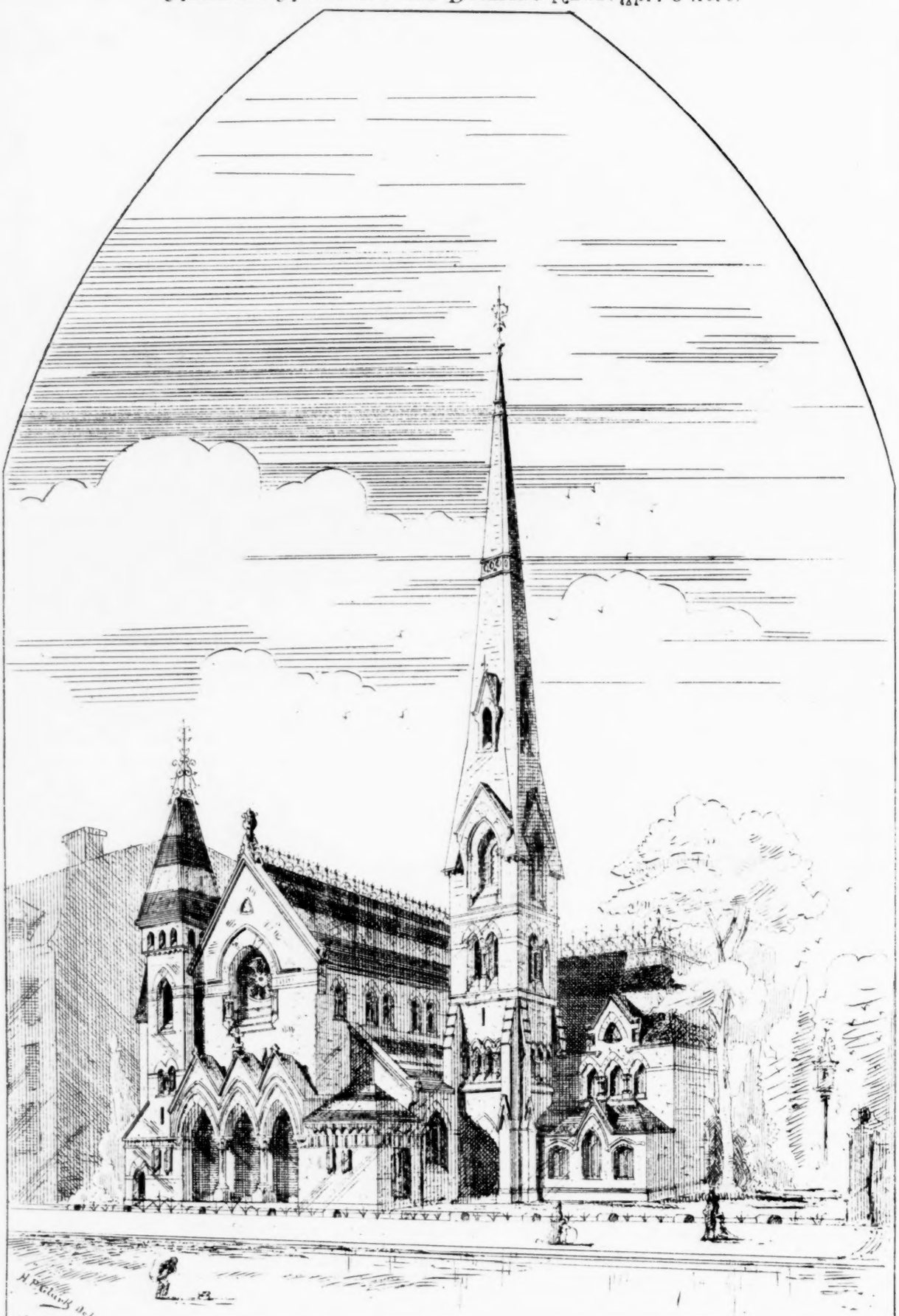
The wholesale store is a fair example of the Italian style, executed entirely in white Westchester marble. The platform or raised step on the sidewalk is of marble: it was built before "patent lights" were invented, and before cast-iron came into use for exteriors. The first story is of marble, with Corinthian columns and antæ. It has a marble entablature and cornice. (This was before the galvanized-iron age.) The windows of the second, third, fourth, and fifth stories are square headed, with architraves and cornices of good detail, and varied on each story. The main cornice is of marble, with rather small brackets, treated like triglyphs, carrying a marble crown moulding of modest design, and a marble blocking course. All the detail is temperate and refined. The design of the marble-work of the exterior is said to have been made by Otto Gori, an Americanized Italian, who was a manufacturer of monuments and mantle-pieces. The superintending architect was Mr. Snook. This building is an important link between two styles of store-architecture which have prevailed in New York. The one comprises the old stores of Broad and Beaver Streets, of which the fronts seldom ever had any thing more elaborate in the first story than plain square granite posts, carrying a granite lintel and water-table, while the fronts above this were of brick with square windows having stone lintels with one small moulding to each.

Stewart's store was a real sensation. Nothing like it in the line of store-buildings had been seen. Even the Westchester marble was a novelty. Soon it began to be copied, but only in an indifferent way. Cast-iron had just been introduced in first story store fronts as a substitute for granite; and immediately Stewart's marble Corinthian columns were copied in that material; and to this day they are considered by the average New York architects to be the proper thing for first-class wholesale stores. Since the Devil had not yet invented galvanized-iron cornices Stewart's cornice was copied generally in wood, and sometimes in stone or marble, while his Italian windows were imitated everywhere; but invariably the detail was made coarse and clumsy. For, though the architects were for years trying to copy this building, they never produced any thing half as good; and the building stands to this day as the best example of classic or Italian store architecture in New York. Even in this building, when enlarged, all the columns and cornices of the Chambers and Reade Street fronts were executed in cast-iron; they are inferior in every way to those on the old front. It is a curious fact, however, that years after the architects had ceased trying to copy "Stewart's," and were inventing clumsy Italian detail for themselves, a store was built for Develin & Co., on the corner of Warren Street, New York, which was an exact copy of Stewart's in all its details and materials, though not in its dimensions. It was even copied to the extent of omitting "patent lights," and substituting marble platforms. This is the only genuine attempt to copy this remarkable structure. Stewart's wholesale store is now a noticeable building on account of its great size, and the refinement of details in the old part; all the more so when the eye is cast around upon the many vulgar and pretentious designs which surround it. It is always good by comparison with decidedly bad things.

There is no better evidence of the fact that its owner never appreciated it as a work of architecture, than may be had by taking a look at the retail store at Ninth and Tenth Streets. It is absolutely beneath criticism; and there is nothing about it to attract the attention of the ordinary observer, except its great size. Built of cast-iron, it has no more interest than the commonest iron railing, with its oft-repeated balusters. It bears all over it an evidence of cheapness, especially when we observe that it is of iron, — a cheapness which comes from the desire to save pattern-making. In all probability, not more than six patterns were required to cast the several thousand tons which are put in this great iron wall. There is nothing inside of this store except iron columns, all cast from one pattern; and no end of plaster-corniced girders, save the great cast-iron well-hole over the glove-counter, with its bull's-eye skylight above. This is a perfect mine of wasted iron, which, if properly used, would construct several respectable buildings. It is safe to say that this building has done more to retard architectural progress in New York than any other dozen buildings of the worst possible design. It overawes the thoughtless by its size, and seizes the sympathy of the sentimental by the purity of its white paint, — when it is fresh.

It was while building his retail store, that Mr. Stewart made the acquaintance of the late John Kellum; and, from that time forward, all his building enterprises were put into that gentleman's hands, including the finishing of the retail store. Thereafter all his architectural work was characterized by wastefulness and extravagance, and the almost total absence of artistic design. The retail store was overloaded with iron which served no useful purpose. Columns of metal, two inches thick, were used where half the metal would have been within the co-efficient of safety; massive iron girders were used where literally no weight was to be carried; floor-timbers were placed but a few inches apart, — all of which seemed very strange; but it was no one else's business, as must be admitted.

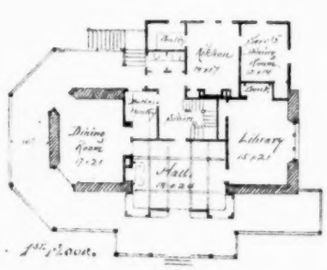
About this time Mr. Stewart purchased the very costly residence which had been built by Dr. S. P. Townsend, on the northwest corner of Fifth Avenue and Thirty-fourth Street. This house had been for several years one of the sights of the city; but the failure and subsequent death of Townsend had cast a gloom over it. Mr. Stewart began by having the whole interior, except the floor-joists, torn out, with a view to reconstructing the house for a residence. But he soon abandoned this project. To the astonishment of all beholders, he tore down the whole structure, even to the taking-out of every foundation-stone. From that time, for ten years, the erection of the great marble dwelling, which is so familiar to every one who visits New York, progressed rapidly at times, and then slowly; and often the work was stopped altogether. It has caused more surmise and gossip than any other house ever erected in America. It became, in the public mind, another Fonthill Abbey, though, unlike that structure, it was never in any danger of falling down. Various are the surmises, but no one knows what it cost. Few persons have ever seen the interior, which is said, however, to be plain, cold, and severe, by reason of the large quantity of Italian marble used in it, though it is rich in frescos by Gribaldi. Nothing concerns us except the bad influence which its exterior design is calculated to obtain with those who might otherwise have been elevated and educated through the benign influence which the expenditure of so much money might have exerted, had it been invested in a well-designed and artistic structure. It is hard to conceive that any one surrounded by works of art, as was Mr. Stewart, could have had so little understanding of what constituted a work of architecture. Yet he went on steadily, piling up bricks and marble and iron, until it was completed; while all around, many patrons of the art, with less means, were doing

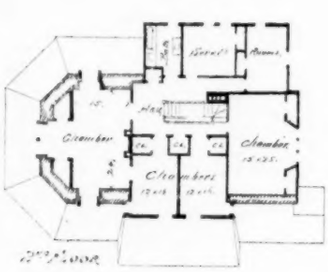


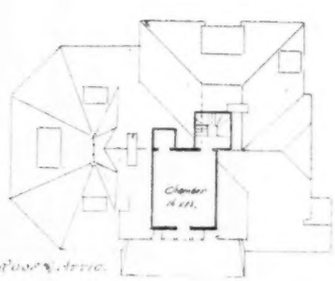
HELIOTYPE JAMES R. OSGOOD & CO. BOSTON

CHURCH OF THE PURITANS

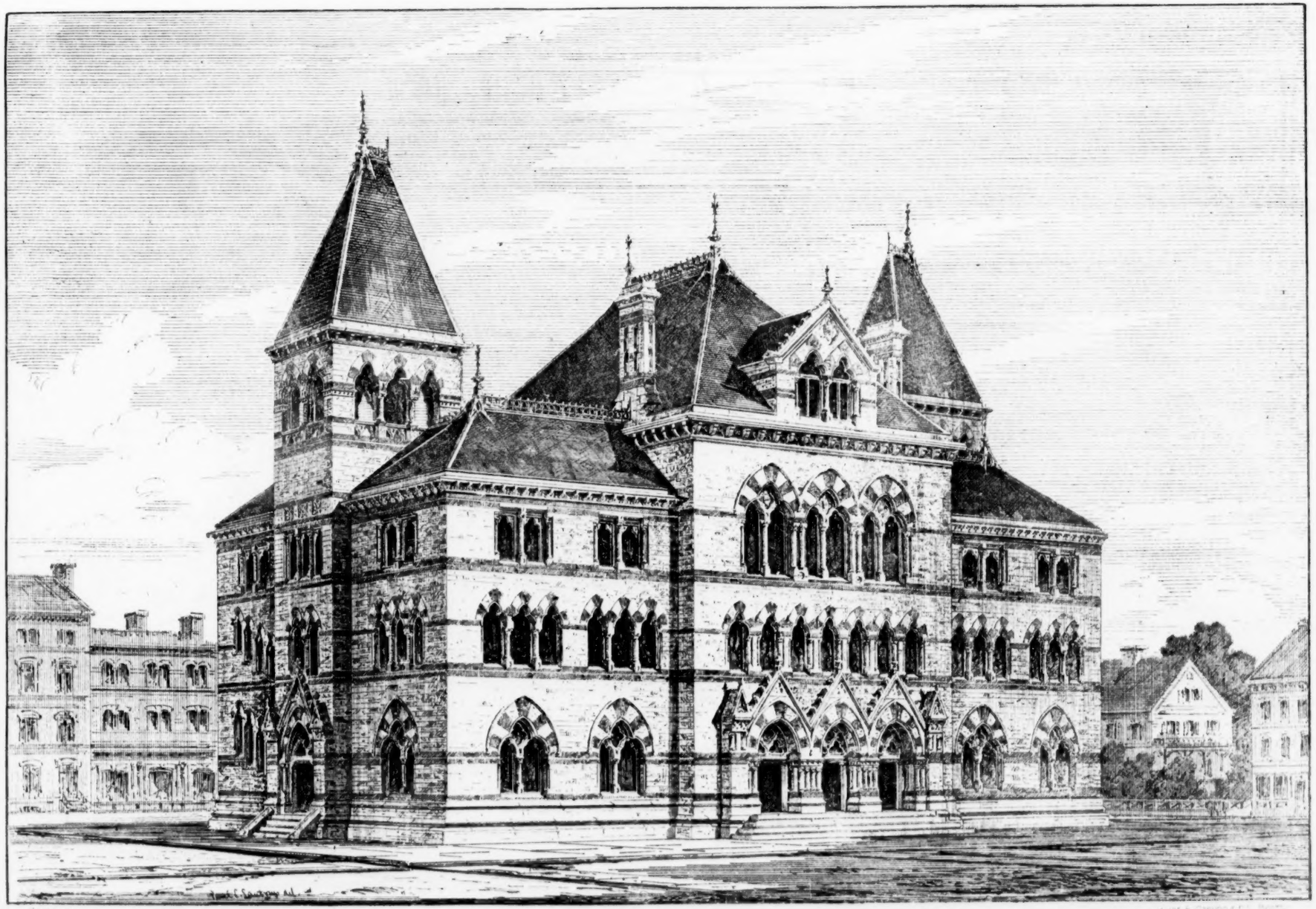
Summer House for Hon. J. Warren Merritt at Manchester Mass. Sam'l J. F. Thayer Arch't Boston.



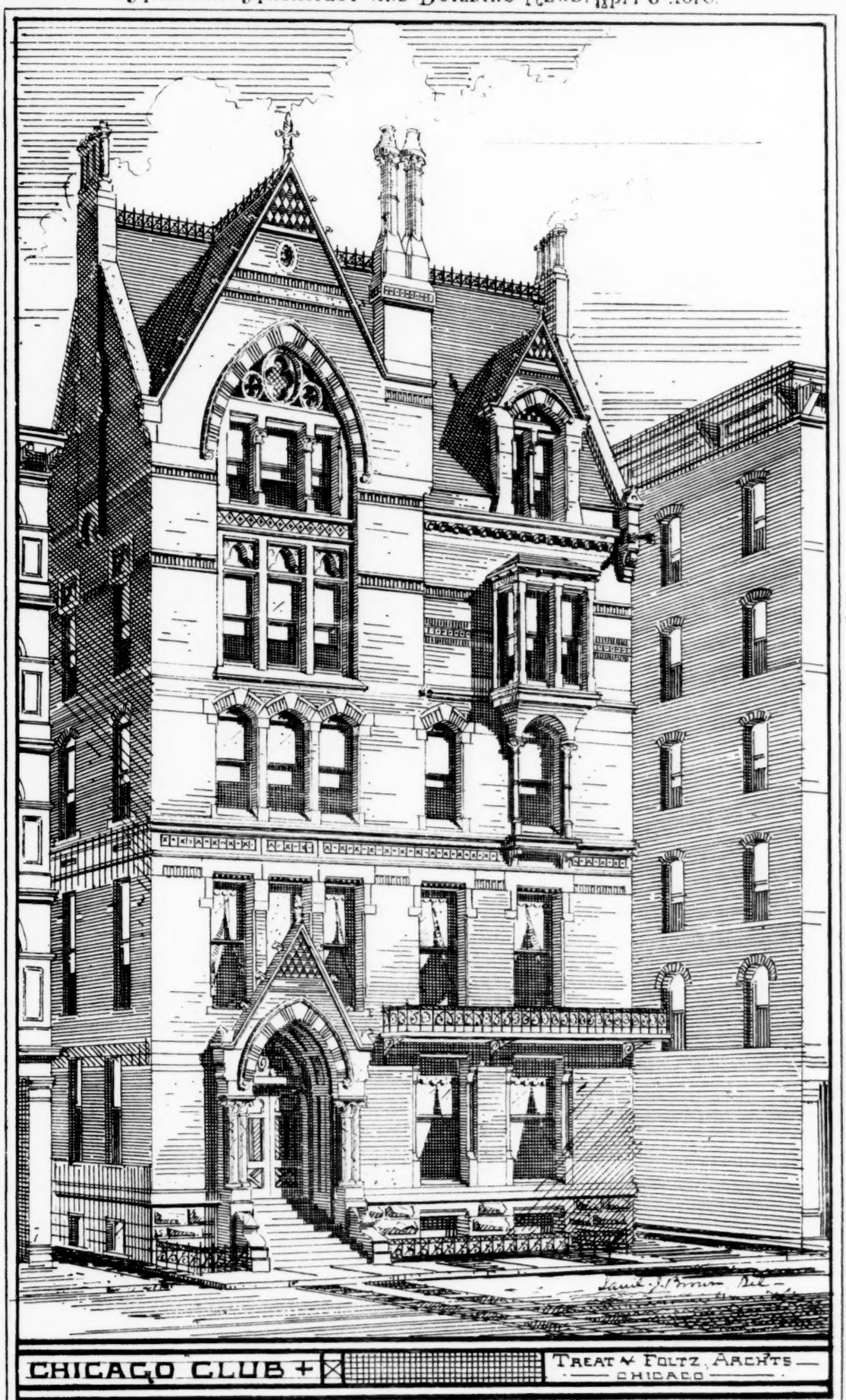




JAMES R. OSGOOD & CO. BOSTON.



U.S. COURT HOUSE AND POST OFFICE COVINGTON. Wm A. POTTER, ARCHITECT.



CHICAGO CLUB + TREAT & FOLTZ, ARCHTS — CHICAGO

HELIOTYPE JAMES R. OSGOOD & CO. BOSTON

much, but in a humbler way, to beautify their city with good architecture.

The purchase of the extensive tract of land on Long Island, known as Hempstead Plain, was one of those freaks of which it is difficult for the general public to understand the import. This, we are informed, has been Mr. Stewart's pleasure-ground, whereon he dreamed of a future model city. It has been named Garden City, and is laid out in broad streets and avenues, drained and improved in every way that modern science could suggest. Many buildings have been erected on it, of whose character we are unable to judge for want of proper information ; but as yet none of them are occupied, and the project has not yet reached fruition. Mr. Stewart's usual reticence has resulted in keeping any extensive knowledge of it from the public. It would, therefore, not be within the bounds of propriety to offer any criticisms upon it. It would seem to have been started with a worthy motive, and not for speculative purposes.

Another of Mr. Stewart's benevolent enterprises has been the founding of the Working-Women's Hotel. This is likewise an undeveloped scheme; and there is nothing to remind us of it except the huge building fronting on Fourth Avenue, and extending from Thirty-second to Thirty-third Streets, in the city of New York. It is such an immense and expensive structure as to have attracted a great amount of attention, and been the subject of much inquiry and discussion in that city. It is still unfinished, though it has been at least ten years in course of construction. For long intervals work on it has been so entirely suspended as to give foundation for the suspicion that he had abandoned the enterprise. Whatever be the practicability or impracticability of housing a host of working-women in such a structure, and placing them under the discipline and surveillance that would be necessary in such an establishment, the architecture of such a prominent building, if architecture it can be called, is certainly a proper subject for criticism. And, for all that may be called by this name, we find three immense fronts, each at least two hundred feet in length, all of heavy cast-iron, and suggesting the forms of a type of Italian Renaissance architecture which has come in vogue within a few years past in connection with some great insurance buildings and a host of wholesale stores. No one can conjecture for what purpose such a great pile of cast-iron is intended. To the thoughtful, it seems to suggest nought but waste, — the throwing-away of valuable material for purposes for which neither nature nor science has intended it. What all this has cost thus far, we know not. The architect who projected this, and all of Mr. Stewart's other building schemes for ten years past, is also dead; and these works have thus become proper subjects for criticism. If they serve no better purpose, they may be a warning to the rising generation of architects and the great capitalists of the future. Such errors of misdirected capital are not likely to be repeated; for the community is advancing in taste, discrimination, and common-sense, as applied to building improvements. But the problem of the day is not so much how to avoid errors, as how to obtain the best results, whether capital be invested for an immediate return of interest, or for any other purpose, charitable or monumental. As the general public grows in appreciation, it will insist that capitalists, who have it in their power, by improving or defacing the public streets of great cities, to advance or retard the progress of intelligence, shall be mindful of the onward march of civilization, or else be held up to public criticism.

P. B. W.

THE ILLUSTRATIONS.

SEA-SHORE HOUSE AT MANCHESTER, MASS. MR. S. J. F. THAYER, ARCHITECT.

THIS house is now being built in that part of Manchester known as the "Old Neck." The first story is built of rubble-stone, — the stone being found on the premises, — with red brick and North River bluestone angles. The upper work being of timber covered with clapboards and shingles, the roofs are intended to be covered with red slate. The entrance hall will be used as a sitting-room, and will have walls and ceiling of wood.

CHURCH OF THE PURITANS. MESSRS. HUBERT AND PIRSSON, ARCHITECTS.

This church is built of Vermont marble, quarry-dressed, at a cost of one hundred and fifty thousand dollars. It will seat seven hundred and fifty persons.

U. S. COURT HOUSE AND POST OFFICE, COVINGTON, KY. MR. WILLIAM A. POTTER, ARCHITECT.

This is one of the eleven Government buildings designed by Mr. Potter, the supervising architect of the Treasury Department, during the past year. Three hundred and five thousand dollars have been appropriated for the purchase of the site and the erection of the building.

THE CHICAGO CLUB HOUSE, CHICAGO, ILL. MESSRS. TREAT AND FOLTZ, ARCHITECTS.

THIS building covers a lot, fifty feet by a hundred and six feet, which is bounded by narrow alley-ways on three of its sides, and fronts on Broad Street, so that light and air can be obtained from all sides. The front is of Baltimore pressed brick, ornamented with bands of Berea sandstone, occasionally inlaid with encaustic tiles and black brick. Below the line of the main floor, the front is of limestone with diagonally pointed and "droved" work. The columns at the entrance are of Scotch granite. The first and second floors are given up to rooms appropriate to a club-house. The third floor is divided up into bedrooms for the use of members of the club. The fourth floor is given up to the steward and his family. It is proposed to move the kitchen from the basement, where it now is, to the upper story of the building, in accordance with the custom now becoming common among hotels and restaurants.

CHURCH OF ST. JOHN, BOIS-LE-DUC, NORTH BRABANT.

WE take the following description of the Church of St. John in North Brabant, from a paper read by Mr. Brewer before the Architectural Association, and published in recent numbers of the Builder and the Architect: —

"The last church with which I shall have to trouble you with any detailed account is the cathedral or church of St. John, at Bois-le-Duc, in North Brabant; and I shall dwell for some time upon the consideration of this noble edifice, because it may be looked upon as the only perfect realization of the ideas of a Dutch mediæval architect passed down to our times. It is possible that the great metropolitan church of Utrecht may, in the days of its splendor, have surpassed that of Bois-le-Duc, to which it bears so striking a resemblance; but unfortunately the nave of this noble cathedral no longer exists; its fine tower has been robbed of a portion of its height; and the choir and transepts, which alone remain to attest its former grandeur, have been fitted up in a style so barbarous, and are so forlorn, desolate, and neglected, that they are a sight that can only fill one's mind with sorrow and regret. It is true that a kind of restoration has been commenced, but this promises rather to add to the havoc and destruction; for a beautiful little doorway which leads to the remains of the cloisters has been "restored" by having the delicate sculpture of its tympanum cut away, and replaced by a vulgar representation of a very badly-bound Bible surrounded by rays. The interior of the church more resembles a lecture-theatre than any thing else; and the apse, which is walled off and full of decayed tombs, seems to be used as a kind of dust-hole, or receptacle for disused lumber. Now, the cathedral at Bois-le-Duc has fortunately escaped many of the misfortunes which have befallen other Dutch churches, and so in its present condition may, I think, without doubt, be pronounced to be the finest church in Holland. In plan it consists of a nave with four aisles, transept with aisles, and a spacious choir with aisles, chevet, and eleven radiating chapels. Over the intersection of the nave and transepts is a lantern crowned with an ogee dome. At the west end rises a lofty tower, capped by a singularly graceful Renaissance spire of wood and lead. Attached to this tower is a single western transept; and at the west end of the outer south aisle is a curious small tower and spire. The tower and western transept are of brick, and formed a portion of an earlier church. They are geometrical in character, and date from the commencement of the fourteenth century; whereas the rest of the church, which was erected between the years 1419, 1497, is entirely of stone. Attached to the south aisle of the choir is a very large chapel, covered all over with the most elaborate flamboyant tracery and panelling, very French in appearance; and to the east of this is the equally elaborate basement story of an octagonal building, which could, I think, only have been intended for a chapter-house; and, if so, it is the only example of an octagonal chapter-house out of England. This is now the cathedral church of the Roman Catholic diocese of Bois-le-Duc, or, as it is called in Holland, St. Hertzogen-bosch. I cannot, unfortunately, give you the dimensions of this magnificent church; but, judging from its appearance, I should say it must be about four hundred feet long, and, as far as I could measure by stepping it, the nave is nearly forty-five feet in the clear; and the height to the vaulting cannot be less than one hundred and fifteen feet. The exterior of

this church is singularly rich in detail, and although late (it was erected between the years 1419, 1497: Cardinal de Granville erected this church into a bishop's see in 1560), is singularly pure and beautiful. The clerestories are supported by noble flying buttresses, which are in two ranges; and the buttresses are crowned with groups of pinnacles, their fronts and sides being adorned with niches and panelling work. All the windows have straight-sided canopies, the tympana of which are adorned with sculpture representing ecclesiastics, knights, ladies, and, in the nave, grotesque subjects. The two transept ends are most noble compositions. The northern one has a splendid portal, and the southern an open porch with two lofty arches. Both are adorned with scripture, but that on the north side has been restored under the direction of Messrs. Hessemans & Venneman, the architects to the cathedral chapter; and, although the ancient sculpture has been copied with some amount of faithfulness, the modern figures which have been added are far from satisfactory. It is difficult to convey by any description the effect of the interior of this church; it is grand and impressive to an extraordinary degree. The piers, which have lofty bases, are a continuation of the arch-moulds. The triforium consists of very rich pierced panelling; and the whole wall-space is covered with tracery, which in the chancel is arranged in geometrical patterns, and in the nave is curvilinear. Over the crossing is the lantern, which is wonderfully cleverly arranged. It is an irregular octagon, the cardinal sides being twice as long as the oblique ones. These oblique sides are blocked by octagonal turrets; but the others are pierced by windows, which, by a singular arrangement of hipping away the roofs of the nave, choir, and transept, are brought down to the very crown of the arches, thus admitting a flood of light into the very centre of the church. The effect of this is perfectly charming. It avoids that dark blank space which usually intervenes between the windows of a lantern-tower and the crown of the arches of the crossing. The furniture of this fine church is even more interesting and splendid than the building itself. At the west end of the south aisle is the baptistery, which is separated from the church by a metal screen. The font is probably one of the very finest in existence; it is unusually large, and, together with its canopied cover, is entirely of brass, richly gilt. The lever which swings off the cover is the most elaborate piece of fifteenth-century metal-work I have ever seen. It is composed of iron and latten; the more delicate portions of the detail are of the latter metal. It would be impossible to give any adequate idea of this beautiful and sumptuous article of church furniture by description. I may, however, explain that the figures surrounding the base, which are perfect examples of modelling, represent the cripples at the Pool of Bethesda. In the lowermost niches of the cover, the baptism of our Lord by St. John, and the Annunciation, are represented. In the upper series of niches are the four Doctors of the Church; and the top niche is filled with a figure of the Eternal Father in the attitude of benediction. The whole is completed by a finial representing the pelican in her piety. The sponsors' candle-sconce, the chrism-box, and shelf for holding the font-cover when it is swung off the font, are all ancient and most interesting. There are two other fine examples of Gothic furniture in this church; and these are a beautiful lampadarium, or chandelier (hanging in the side chapel before mentioned), the centre of which forms a canopied niche containing the statue of a saint, from the base of which spring the candle-brackets; and the choir-stalls, which look as if they were earlier in date than the present building. The rest of the furniture of this church is in the most sumptuous and magnificent style of the Renaissance. The organ-case, which is eighty feet high and nearly forty feet wide, is built of solid logs of oak. It is dated 1602; it is a most noble composition, enriched with figures (many of which are life size), arabesques, foliage, grotesques, and architectural ornament, beautifully designed, and executed in the most spirited and masterly manner. This organ is one of those wonderful productions of the earlier Renaissance age which seems to have been carried out quite regardless of expense, labor, and time. To give you some idea of its wonderful richness, I should state that the flutings of the quasi-Corinthian columns supporting the upper portion of the organ "towers" have delicate incised enrichments running up them. The pipes are very skilfully arranged: in the "flats" they are left in white metal, with the tongue chamfer alone gilded; but in the "towers" the centre pipe is gilt, and is embossed, twisted, and ornamented. The choir organ is rather later in date than the great organ, but equally splendid. The organ at Bois-le-Duc possesses what every organ-case ought to be provided with, — a ceiling or roof. If this is omitted in an organ, the pipes draw in the dust, and the organ becomes clogged, and is always out of tune; in addition to which, as sound ascends, the roof or top to an organ is as necessary as a sounding-board to a pulpit, unless the organ is under ground. The tone of this Bois-le-Duc organ is as magnificent as its appearance, — vastly, to my mind, superior to the Haarlem one. It does not, it is true, imitate thunderstorms, waterfalls, or stone rolling down the hill; but it has a grand, rich, diapason tone, which, it seems to me, is what one wishes to hear upon an organ, which is, after all, a musical instrument, and not a box of conjuring tricks. The pulpit is in the same style, and nearly as richly carved, as the organ; and the side screens of the choir and chapels are composed of oak panelling about three feet high, and upon this rest brass-gilt balusters beautifully moulded; the whole being crowned by rich cornices carved with arabesques and foliage. The altars are not worthy of such a magnificent church; they are late Renaissance, and rather poor and uninteresting. Originally there was an altar against every pillar of the nave, the piscinæ and ambries of which remain."

CORRESPONDENCE.

NEW YORK.

SOME few of our architects are busily at work, while the fact remains as previously written, that the profession generally is finding the season of 1876 a very dull one.

Mr. E. H. Kendall has just completed the drawings for a new business-structure, covering a plat a hundred feet square. The building will stand on Greene Street, on the site of the old Methodist church, a short distance above Canal Street. The district is now almost entirely given up to wholesale business houses, and for blocks, rows of iron-fronted abominations are to be seen. Mr. Kendall's design will be in marked contrast with these affairs. There are six stories with a basement; the front, rising to a height of over eighty feet, is of brick and Dorchester stone. Philadelphia face-brick, with black mortar, gives strength to the whole façade, while the stone is very liberally employed in courses, binding-blocks, &c. The style is of the Greek-Renaissance now so generally employed by the best French architects in designs for town buildings. The effect of the whole front is that of substantial honesty in construction, and modest power in design. In plan, the building offers no special point. By drawing the rear wall back from the rear line of the lot, an opportunity for skylights has been secured; and these, in place of being allowed to open into the first story, in one line across the lot, as is usually the case, have been ingeniously broken, and part of them left to open above the second-story ceiling. The floor-beams are of wood; while the roof is of fire-proof construction, iron beams with brick filling, and an asphalt layer over all. This will offer a very material resistance in case of fire-brands falling on the flat roof from a conflagration in the neighborhood. The front windows will be provided on all the stories with iron rolling shutters, while at the rear the ordinary ones will be employed; with heavy brick walls on all sides, and a fire-proof roof, the building will be comparatively safe. The whole building is heated from steam-boilers, placed below the sidewalk entirely without the building proper. The elevators, instead of being arranged at one of the extreme front corners, compelling the use of the sidewalk as a storage space, and cutting off the use of one tier of corner windows from top to bottom, are carried back a dozen or fifteen feet, giving space for a freight-room in front, while the elevator shaft gains all the light necessary from the several stories. Iron has been used in the designs very sparingly and very properly. The first-story brick work is thrown into four piers, one at each corner, and two intermediate ones. The three spaces thus made are filled in with light iron shafts, while the weight of the superincumbent wall is really borne by the girders thrown over the openings from pier to pier. Light cast-iron gutter cornices are also used; but everywhere the metal is in entire subordination to the general design. The building will be completed by November next, at a cost of ninety thousand dollars, for E. Oelbermann and Co., woollen importers. Such an edifice, a year or so ago, would have cost not less than two hundred thousand dollars; and the work will show to business men and capitalists that a building including all possible conveniences can be put up within reasonable bounds, and that in place of employing second or third rate architects to put up one of the commonplace stock structures selected from the price-list of the iron works, money may be saved by hiring brains to prepare the plans and supervise the erection. Mr. Kendall, as the architect of the Equitable Life, the author of the selected design for the German Savings Bank, and as having prepared the designs for the immense block of business structures on the old New York Hospital

grounds, has taken no small part in the beautifying of New York as she stands to-day.

Speaking of the hospital property, recalls the work of Mr. J. Morgan Slade, a young architect, and recent graduate of Mr. Kendall's *atelier*. Mr. Slade has just filled up a gap of some twenty-five feet front by eighty feet deep, all that remained of the old grounds, with a small building. To right and left of it are the traditional iron fronts, while it rises a rich specimen of Italian Gothic. There is a basement ten feet six inches, running out under the street pavement entirely across the roadway. There is an elevator thrown back from the front, and giving all the light from the front windows to the show-rooms. The material of the front is the dark rich Trenton brick, in black mortar, and with occasional black brick. The bonding-blocks of the piers, the voussoirs, courses, caps, &c., are of North River bluestone, or Dorchester stone, the two being used in combination. The shafts of the small columns supporting the arches thrown over the several windows, are of Scotch granite, red or gray. The main cornice is of iron, cast and then galvanized. The whole was erected at a cost of thirty-five thousand dollars; which for a twenty-five by eighty feet area, using party walls, shows in some degree the amount spent on the façade.

Mr. Griffith Thomas is one of the busy architects of the year. The last plan entered from his office at the Building Department is the design for the new business house of the American News Co. The business of this concern has grown to very great proportions, its present quarters occupying several buildings. Its connection with the newspaper officers and publishing firms demands that its headquarters be near Printing-House Square. Upon the abandonment of the old United States Court building in Chambers Street, opposite the new County Court House, an opportunity offered for securing a good plat, which the News Company were not slow to accept. The old building was originally built as a theatre, and old New-Yorkers many remember Burton's Chambers-street Theatre once a popular playhouse of the metropolis. The piece of land is 151 by 75 feet, extending through to Reade Street. The difference in grade is about 12 feet between the front and rear street; and this difference has been taken advantage of to get the basement floor of the front level with the sidewalk in the rear. The elevation shows a structure four stories on Chambers and five on Reade Street. The front is perhaps as fine a one as Mr. Thomas has ever produced; at least, for some time. The 75 feet of frontage have been thrown into three subdivisions, with heavy piers running from foundation to cornice. These piers are of brick, with granite blocks worked in, though the strength is given to the support by bluestone binders. The cornice is of stone, eight feet high, with a broken pediment in the centre, and resting upon a pedestal on this is a zinc figure of a newsboy, with a package of papers under the left arm, and in the extended right hand a single sheet. The lad has a cap on his head, and has evidently been modelled from life. This figure will be ten feet high. Above the cornice Mr. Thomas has placed a balustrade some five feet in height, of galvanized iron. The cornice and balustrade are repeated at the other face of the building; but this face is much plainer, having a substantial factory look. The elevators are at either of the Reade-street face corners, and their position within the building is shown without by broader windows and heavier subdivisions of brick work. The windows are segmental, headed, with granite lintels, and granite sill-courses running across the face. Below the second-story windows a broad layer of granite block bears the inscription, "American News Company," in raised letters. Within, the plan is very simple. The cellar, which is nine feet high, has under the Reade-street sidewalk the boilers for heating, and elevator power. Of these lifts there are four. Two large ones seven feet square for freight, and two passenger elevators. Under the Chambers-street sidewalk a document vault has been built, entirely fireproof. This vault is two stories in height, the lower story being entered from the cellar, and the upper one from the basement story. Interiorly it is 4 feet 6 inches by 24 feet. The first story is devoted to a magnificent counting-room, occupying the full size of the lot, and obstructed only by a double line of columns supporting the girders. On entering the Chambers-street entrances, broad staircases curve up on either side; while, by passing to the other end of the store, the elevators may be taken. The interior finish will be in ash and black walnut; but the two upper floors are to be left in the rough, as storage-lofts. The whole building is to be completed by December next, at a cost of two hundred thousand dollars.

Mr. Thomas has also in preparation, but not sufficiently elaborated to warrant a description, a French apartment hotel.

A SIMPLE STATEMENT OF THE HOUSE-DRAIN QUESTION.

EVERY house should have a suitable drain for the removal of its liquid household wastes, such as the outflow from the kitchen sink, and all manner of foul liquids. The character of the interior drainage must, of course, depend on the circumstances, conditions, and means of the owner; but no house is a safe or fit habitation, which has not some well-devised and soundly constructed exit-drain.

It may almost be said, that the less complete the interior arrangements, and the smaller the amount of liquid to be drained away, the more care must be given to the exit-drain. If, in addition to the kitchen wastes, it carries a plentiful supply from water-closets, bath-rooms, wash-bowls, &c., it is much more likely to keep itself clean than if the only liquid reaching it is that flowing from the kitchen sink, containing a considerable amount of hot and melted fat, which, as soon as it loses its heat, congeals, and attaches itself to the sides of the drain, arresting the organic refuse that floats in the water, and sooner or later inevitably choking the passage. One most common mistake with regard to house-drains is that they are made too large. It is incorrect to suppose that a very large drain is safer than one of moderate but sufficient size; because, the smaller the drain, the more concentrated the flow, and the more thorough the flushing when large amounts of water are passed through it, as on washing-day.

If the liquid is received direct from the kitchen, without any provision for stopping the grease, a twelve-inch drain will soon be filled to a certain depth, and the water-way will assume a broad flat form, over which the flow will spread itself, and become too thin and too slow to produce the proper scouring effect. A much smaller pipe would have this accumulation of grease confined within a narrower area; and the whole of a copious flow, being concentrated upon it, would have a much better chance to cut it away, and remove it. It may be taken as a fixed rule, that no private house, no matter how large, can possibly need for its drainage a pipe larger than four inches in diameter. Neither would it ordinarily be prudent to use a pipe smaller than this, for any house; and this size may therefore, under ordinary circumstances, be taken as an invariable one for private houses.

The drain should be as straight as possible. Every turn increases friction, and increases the danger of obstruction. Also it is easy, with a straight drain, to pass through it a stiff wire from the outer end, and thus remove any accumulation. The drain should have always as much *fall* as possible. Even an angle of forty-five degrees would not be too steep; but if the pipes are laid with care, and an absolutely uniform inclination is secured, even so little descent as one foot in one hundred feet will suffice.

The question of material is a very important one, especially with drains intended for the carrying of other matter than pure water. These should be not only straight and uniform in bore, but they should be made of a smooth, impervious material. The common stone drain (blind drain) is in every way bad. Its channel is irregular and rough; its inequalities accumulate deposits of fermenting solid matters; it gives easy access to rats and mice, who are tempted into it by the waste food it contains; and, worst of all, instead of carrying its liquids safely and rapidly to a point of outlet, it allows these to ooze and dribble away into the soil, often leaching down under the foundation of the house, or finding their way into the well from which drinking-water is taken.

It is quite customary, with those who wish to do thorough work, to make the house-drain of brick; and this is certainly an improvement on stone, but more cannot be said for it. It is necessary to make a brick drain unduly large; and it is impossible to make it so entirely true and smooth as is necessary for the best efficiency. In addition to this, its material is so porous that it can never be long relied upon to afford a perfectly impervious conductor of the foul and dangerous material that it is its office to remove.

The much-lauded cement pipe is of good form, makes a true joint, and seems at first sight to be all that can be asked. It has been found, however, that there is a want of uniformity in the quality of these pipes, which renders them somewhat unreliable; and they have the very important objection, for such uses as this, that the slight roughness of their interior surface tends to catch particles of hair or fibre, or other material, which become *nuclei* for further accumulations, which form a firm and close attachment with the material of the pipe.

Experience has pretty well established a belief that the only entirely safe and reliable material for this use is either iron, which

is inconvenient to repair, or the vitrified stone-ware pipe, now so generally used, — universally used where the best work is contemplated.

Not only must the drain be laid in a straight line, and on a true fall; but the greatest care must be taken, that, in fitting the ends into the sockets, the bore is brought to a true line, and that in closing the joints, while they are tightly and securely cemented so that there can be no possible leaking, no cement is forced through to the interior of the joints to create roughness in the water-way. Too much care cannot be given to the foundation upon which these pipes are laid; and it is never safe (unless they are laid in a heavy bed of concrete) to put them on land that has for any purpose, even within so long a time as a year, been dug and refilled below the level to which they are to lie; for the reason that the slightest settling of the ground, coupled with the heavy pressure of the earth above, is quite sure to deflect the pipes sufficiently to crack open their joints, and cause a leakage.

When there is plumbing work in the house which will furnish a considerable flow of water, it is best, when practicable, to admit the kitchen outlet at a point between the outlet of the drain and its connection with the soil-pipe, for the reason that the soil-pipe is more often flushed, and carries a larger proportion of pure water, which will by its cleansing action have a tendency to remove any deposit from the kitchen outflow. At the same time, whatever precaution is taken in the way of flushing the drain, it is always wise to adopt some form of grease-trap, that is to say, to receive the kitchen outflow immediately on its delivery from the sink into a vessel that has its outlet through a bent pipe, — the mouth turning down below the surface of its water. This trap need not be more than eighteen inches in diameter, and a foot deep, and should be covered and have a ventilating pipe, for its odors will not be pleasant. This mass of water will be cold enough to congeal the grease at once, and this will float above the level of the outlet, which will deliver only water fit to be admitted to the drain. In addition to this grease-trap (or in lieu of it, where the proportion of fatty matters is small), it is a capital plan to use a modern invention known as Field's flush-tank, which is simply a vessel having its outlet by a siphon so arranged as to come into action whenever the tank is sufficiently filled, flowing copiously until it is emptied, and then accumulating the dribbling waters until it is filled again for another discharge. This arrangement secures the drain against the slowly trickling stream that has so great a tendency to deposit silt in its course, and secures the important condition that when any foul water is flowing through the drain it shall move forward in a rapid rush that will prevent the halting of solid matter by the way.

EDITOR AMERICAN ARCHITECT.

Dear Sir, — The Fraser Institute has decided its competition on April 22, giving, as was predicted, its first prize to a Montreal firm, Messrs. Hopkins & Wily. This goes to prove the general rule, which has no exceptions. The second prize was "Castalias." The unsuccessful competitors are the recipients of thanks, and will get their plans on paying their expressage. It has taken three months to arrive at a conclusion, and to note all that was good in forty-six sets of plans for future use. D.

NOTES AND CLIPPINGS.

THE NEW YORK STATE CAPITOL. — At a recent meeting of the Baltimore Chapter, A. I. A., action was taken as follows: "At the request from the Albany and New York Chapters to express an opinion in regard to the action taken by those chapters in reference to the questions touching the State Capitol, the Baltimore Chapter, while it concurs in opinion with the New York and Albany Chapters on the question of the design of the building, thinks the discussion and settlement of the points in question had better be confined to the New York State Chapters."

NEW HOSPITAL. — When the Park Hospital was taken down, the Commissioners of Charities and Correction leased of the New York Dispensary, their building at White and Centre Streets, to be used as a hospital. The trustees of the Dispensary agreed to make extensive alterations, including the putting-in of an elevator large enough to take on a stretcher, and to furnish accommodations for forty beds, or for sixty in case of a great demand. When the arrangements were all completed, Controller Green refused to sign the lease. The Dispensary Trustees sued the Commissioners, because they had turned out tenants to make the changes, and had an empty building on their hands. Judge Brady decided that Mr. Green's objections to the lessee were not sufficient. This decision was reversed by the General Term, but has now been sustained by the Court of Appeals. As an argument in favor of leasing a part of the New York Dispensary building, it is stated that the trustees will use the entire rental for charitable purposes, thus virtually paying it back to the city again. The principal opposition to the project, it is understood, comes from the conductors of the New York Hospital, in the old Chambers-street Police Station, who claim that no further down-town accommodation is necessary. This argument is met by the friends of the new project, by simply showing that the Chambers-street Hospital is far too small for the wants of the lower part of the city, having only twenty-three beds, and being able to make room for only thirty in cases of great demand.

ST. GEORGE'S HALL. — St. George's Hall, Philadelphia, was formally dedicated on the 24th of April, the one hundred and fourth anniversary of the society. The building is of white marble. There is yet to be placed in front of the building a statue of St. George and the Dragon, which is being cast for the society at Birmingham. The cost of the building is about one hundred and fifty thousand dollars, the entire amount having been furnished by English residents.

PROFESSOR OF ARCHITECTURE. — Mr. W. L. B. Jenney of Chicago has been appointed Professor of Architecture and Design in the Polytechnic School, University of Michigan, Ann Arbor. Lectures will commence in September next.

A MARINE HOSPITAL ON CAPE COD. — Dr. Peter Pineo, who is the Superintendent of the United States Marine Hospital Service on Cape Cod, is urging the passage of an appropriation for the erection of a pavilion hospital at Hyannis. At present many sick and disabled seamen of vessels belonging to or touching at the nine ports of the two hundred miles of the seacoast of Cape Cod have to be provided with relief in private houses, or transported by rail to Boston. No appropriation is asked for; but the bill before the house authorizes the Secretary of the Treasury to apply a sum not exceeding $16,000, to be paid out of the Marine Hospital fund, if the receipts from hospital dues are sufficient to warrant the application of the amount named for the purpose.

THE ROOFING ORDINANCE. — The building-inspector of Chicago insists that the new ordinance in regard to roofing shall be strictly enforced after the 1st of April. Some of the roofers had contracts pending at the time of the passage of the ordinance; and leniency has been shown in these cases. According to the requirements about to be enforced, all felt and composition roofs shall be made of not less than three-ply No. 2 felting, which shall be well cemented together, and be covered with distilled composition, and clear screened gravel, well bedded, swept off, and covered with the same material as above described; and each of the coverings shall not be less than one-half of an inch in thickness. It is claimed that such a roof will not be ignitible, and will last for ten years.

QUICK WORK. — About two weeks ago Mr. Joseph Snavely, of Orrville, Penn., commenced building a house; and in forty-six hours' work the house was finished, painted, papered, &c. The size of the house was twenty-eight feet square, containing four rooms on the first floor, and four rooms on the second.

M. COURBET. — The sale of M. Courbet's property under a State execution, pursuant to a judgment decreeing him liable for the destruction of the Vendôme Column, took place on the 15th of March. As M. Courbet possessed in France only a small farm in the Doubs, some securities which have been seized, the furniture of his studio, and six pictures, the amount realized is not estimated at more than eighty thousand francs, so that he will remain a debtor for at least two hundred thousand francs.

LILLE. — An artistic discovery has been lately made at Lille. While employed in some excavations, the workmen suddenly alighted upon the ruins of a Roman city. The chief remains at present inspected are those of a temple, which antiquarians attribute to Apollo. Tumular stones of the seventh and eighth centuries, and some rich mosaics of a very primitive date, have also been dug up.

ROYAL CONSIDERATION. — In the year 1781 there occurred an instance of royal consideration for the dear people, well worthy of record. The theatre in the Palais Royal, Paris, in which the opera had been established for ninety years, was burnt; and, under the patronage of Marie Antoinette, the architect Lenoir, by working day and night, built a new opera-house at the Porte St. Martin in eighty-six days. Rumors at once began to circulate at court, that it was unsafe, that a building erected in such hot haste could not have been carefully constructed. The intimidated authorities therefore decided that, in order to test the strength of the new opera-house before permitting the queen to enter it, a performance should be given gratis to the people of Paris. The beams having been thus tested by the common herd, their Majesties honored the opera with their presence.

ROMAN ANTIQUITIES. — During the year 1875, the following objects of antique art were dug up in the city of Rome: 14 statues, 20 heads or busts, one sarcophagus, 2 cinerary urns, 37 sacred or ornamental articles, 6 sculptures on bone or ivory, 5 objects in gold, 4 in silver, 22 in bronze, 405 in terra-cotta, besides a vast number of inscriptions, utensils, and fragments. Of antique money there were found 9 pieces in gold, 21 in silver, and 6,715 in bronze.

PHILADELPHIA. — A recent census shows that Philadelphia has 143,936 dwelling-houses.